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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,418	12/05/2000	Olaf Manczak	098296 0269228	8756

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PATENT DEPARTMENT

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EXAMINER

NGUYEN, THANH T

ART UNIT

PAPER NUMBER

2144

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/731,418

Applicant(s)

MANCZAK ET AL.

Examiner

Tammy T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



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Detailed Office Action

1. This action is in response to the application **09/731418** filed. **December 5, 2000**
2. Claims **1-29** have been examined.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 17, 28 recite the limitation "the bitfile". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

6. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Burner et al. (USPN 6,282,548 – Date of Patent: August 28, 2001, herein referred to as "Burner").

7. As to claim 1, Burner teaches the invention, including a file storage system comprising: a gateway service adapted to service requests from clients for accessing files having respective file identifiers (col.8, line 15-22, Proxy server service request from client to server); a storage service adapted to provide permanent storage of file data corresponding to the files (col.5, lines 40-60, storage data); and a metadata service adapted to maintain metadata corresponding to the files, a portion of the metadata correlating respective locations of the files in the storage service with the respective file identifiers (col.5, lines 40-60, col.20, lines 14-16); the gateway service communicating with the metadata service to determine a location of the bitfile data in the storage service in accordance with the file identifier, and with the storage service for providing clients access to the bitfile data in accordance with the determined location, whereby the clients need only provide the file identifier to access the file from the determined location (col.20, lines 25-45).
8. As to claim 2, Burner teaches the invention, wherein the storage service comprises a plurality of storage devices, the location of the bitfile data being associated with the plurality of storage devices (col.15, lines 50-55).
9. As to claim 3, Burner teaches the invention, wherein the storage service is adapted so that the number of storage devices is scalable (col.13, lines 40-45).
10. As to claim 4, Burner teaches the invention, wherein the storage service and the metadata service are adapted so that the location of the bitfile data corresponding to a certain one of the files is associated with more than one of the plurality of storage devices (col.20, lines 30-40).

11. As to claim 5, Burner teaches the invention, wherein the more than one of the plurality of storage devices are determined in accordance with a redundancy scheme (col.15, lines 15-40).
12. As to claim 6, Burner teaches the invention, wherein the gateway service is adapted to provide access to an operable device of the more than one of the plurality of storage devices rather than a failed device of the more than one of the plurality of storage devices in accordance with a client request associated with the certain one of the files and with the location determined from the metadata service (col.18, lines 10-15).
13. As to claim 7, Burner teaches the invention, wherein the more than one plurality of storage devices are determined in accordance with a striping scheme (col.15, lines 50-55).
14. As to claim 8, Burner teaches the invention, wherein the gateway service comprises a plurality of gateway service nodes, the gateway service nodes being adapted to uniformly communicate with the metadata service, the storage service and the clients (col.15, lines 10-20).
15. As to claim 9, Burner teaches the invention, further comprising a load balancer adapted to distribute the requests from the clients to the plurality of gateway service nodes (col.10, lines 25-35).
16. As to claim 10, Burner teaches the invention, wherein the gateway service nodes provide substantially the same performance in servicing the client file requests (col.16, lines 40-50).

17. As to claim 11, Burner teaches the invention, wherein the gateway service is adapted so that the number of gateway service nodes is scalable (col.10, lines 25-35).
18. As to claim 12, Burner teaches the invention, wherein the metadata service comprises a plurality of metadata nodes, the metadata nodes being adapted to uniformly communicate with the gateway service and to maintain the metadata (col.15, lines 15-40).
19. As to claim 13, Burner teaches the invention, wherein the metadata service is adapted to implement a hierarchical storage management scheme (col.15, lines 50-55).
20. As to claim 14, Burner teaches the invention, including the metadata service is adapted to implement a hierarchical storage management scheme, a first set of the plurality of storage devices having a first capacity and performance characteristic, a second set of the plurality of storage devices having a second capacity and performance characteristic different than the first characteristic, the metadata service cooperating with the storage service to manage a migration of bitfile data from the first set to the second set of storage devices, whereby clients requesting access to moved files corresponding to the migrated bitfile data need only supply the file identifiers corresponding to the moved files (col.18, lines 10-15, col.20, lines 30-45).
21. As to claim 15, Burnner teaches the invention, wherein the clients comprise one of at least one of a NFS client, a CIFS client, a HTTP client, and a FTP client, the gateway service being further adapted to service the client requests in accordance with the respective protocols used by the clients (col.14, lines 51-55).

22. As to claim 16, Burner teaches the invention, including a file storage system comprising: a scalable number of gateway servers each adapted to service requests from clients for accessing files having respective file identifiers (col.18, lines 15-22, Proxy server service request from client to server); a scalable number of storage servers each adapted to provide permanent storage of bitfile data corresponding to the files (col.5, lines 40-60, storage data); and a metadata service adapted to maintain metadata corresponding to the files, a portion of the metadata correlating respective locations of the files in the storage service with the respective file identifiers (col.col.5, lines 40-60, col.20, lines 14-16); the gateway servers each communicating with the metadata service to determine a location of the bitfile data in the storage servers in accordance with the file identifier, and with the bitfile storage servers for providing clients access to the bitfile data in accordance with the determined location, whereby a client who accessed the file when the scalable number comprised a first value need only provide the same file identifier to access the file when the scalable number comprises a second value different than the first value (col.20, lines 25-45).
23. As to claim 17, Burner teaches the invention, including method for providing shared access to stored files, comprising: servicing requests from clients for accessing files having respective file identifiers (col.18, lines 15-22, Proxy server service request from client to server); providing permanent storage of file data corresponding to the files in a first storage device (col.5, lines 40-60, storage data); and maintaining metadata corresponding to the files in a second storage device different than the first device, a portion of the metadata correlating respective locations of the files in the

first storage device with the respective file identifiers, determining a location of the bitfile data in the first device in accordance with the file identifier from the metadata maintained in the second device (col.5, lines 40-60, col.20, lines 14-16); and providing clients access to the bitfile data from the first device in accordance with the determined location, whereby the clients need only provide the file identifier to access the file from the determined location (col.20, lines 25-45).

24. As to claim 18, Burner teaches the invention, wherein the first storage device comprises a number of storage devices, the location of the bitfile data being associated with the number of storage devices (col.15, lines 50-55).
25. As to claim 19, Burner teaches the invention, wherein the maintaining step includes accounting for a scaling of the number of storage devices (col.13, lines 40-45).
26. As to claim 20, Burner teaches the invention, wherein the maintaining step includes correlating the location of the bitfile data corresponding to a certain one of the files being associated with more than one of the number of storage devices (col.20, lines 30-40).
27. As to claim 21, Burner teaches the invention, further comprising determining the more than one of the number of storage devices in accordance with a redundancy scheme (col.15, lines 15-40).
28. As to claim 22, Burner teaches the invention, further comprising providing access to an operable device of the more than one of the number of storage devices rather than a failed device of the more than one of the number of storage devices in accordance

with a client request associated with the certain one of the files and with the determined location (col.18, lines 10-15).

29. As to claim 23, Burner teaches the invention, further comprising determining the more than one of the number of storage devices in accordance with a striping scheme (col.15, lines 50-55).
30. As to claim 24, Burner teaches the invention, wherein the servicing step includes servicing the requests in a uniform manner by a plurality of gateway service nodes (col.15, lines 50-55).
31. As to claim 25, Burner teaches the invention, further comprising distributing the requests from the clients to the plurality of gateway service nodes (col.10, lines 25-35).
32. As to claim 26, Burner teaches the invention, wherein the gateway service nodes provide substantially the same performance in servicing the client file requests (col.16, lines 40-50).
33. As to claim 27, Burner teaches the invention, wherein the servicing step includes servicing the requests in accordance with at least one of a NFS protocol, a CIFS protocol, a HTTP protocol, and a FTP protocol (col.7, lines 35-40).
34. As to claim 28, Burner teaches the invention, further comprising: migrating certain of the bitfile data from the first device to a third storage device different than the first and second storage devices; and updating the metadata corresponding to the migrated bitfile data to reflect the migrated location of the migrated bitfile data, whereby the

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clients need only provide the file identifier associated with the migrated bitfile data to access the file from the migrated location (col.9, lines 40-45).

35. As to claim 29, Burner teaches the invention, further comprising: removing the bitfile data from old locations in the first storage device (col.14, lines 25-35).

Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

37. Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Tammy T. Nguyen** who may be reached via telephone at **(703) 305-7982**. The examiner can normally be reached Monday through Friday between 8:00 a.m. and 4:30 p.m. eastern standard time. If you need to send the Examiner, a facsimile transmission regarding this instant application, please send it to **(703) 872-9306**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, **Bill Cuchlinski**, may be reached at **(703) 308-3873**.

TNN

April 14, 2004


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